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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,840	10/14/2003	Hanna E. Viertio-Oja	2532-00331	3517

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ANDRUS, SCEALES, STARKE & SAWALL, LLP
100 EAST WISCONSIN AVENUE, SUITE 1100
MILWAUKEE, WI 53202

EXAMINER	
MALLARI, PATRICIA C	
ART UNIT	**PAPER NUMBER**
3735	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/684,840	VIERTIO-OJA ET AL.	
	Examiner	Art Unit	
	Patricia C. Mallari	3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *87-132* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *87-121* is/are allowed.

6)☒ Claim(s) *122-128* is/are rejected.

7)☒ Claim(s) *129-132* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/14/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 122-128 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 69-74 of copending Application No. 10/407,667. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Objections

Claims 87- 89 and 106 are objected to because of the following informalities:

On line 9 of claim 87, “a EEG signal” should be replaced with “the EEG signal”.

On line 1 of claim 88, “claim 88” should be replaced with “claim 87”.

On line 1 of claim 89, “claim 88” should be replaced with “claim 87”.

On line 1 of claim 106, "claims 81" should be replaced with "claims 87".

Appropriate correction is required.

Applicant is advised that should claim 127 be found allowable, claim 126 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Allowable Subject Matter

Claims 122-128 would be allowable if the double patenting rejection were overcome.

Claim 129-132 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 87-121 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

US Patent No. 6,032,072 to Greenwald, US Patent Application Publication 2005/0165323 to Montgomery et al., and US Patent No. 5,349,962 to Lockard et al. represent the closest prior art.

Regarding claims 87-121, Greenwald teaches a method for ascertaining the cerebral state of the patient, including a state resulting from the administration of a drug. The method comprises obtaining EEG signal data and EMG signal data (col. 7, lines 24-27 of Greenwald), analyzing a sample of sequential EEG signal data to obtain a first indication indicative of the cerebral state of the patient, analyzing a sample of sequential EMG signal data temporally related to the EEG signal data sample to obtain a second indication indicative of electromyographic activity in the patient (col. 7, lines 26-30 of Greenwald), and producing a composite indication from the first and second indications (col. 7, lines 32-39 of Greenwald). Greenwald lacks the analysis of the EMG signal effectively using a sample of short length than that of the EEG signal data sample due to the higher frequency of the EMG signal data. Greenwald further lacks the composite indication being capable of being updated at a repetition rate allowed by the shorter sample length of the EMG signal data to rapidly indicate changes in the cerebral state of the patient. Regarding claims 122-132, Greenwald and represent the closest prior art. Greenwald teaches an apparatus for ascertaining the cerebral state of a patient, comprising means for obtaining biopotential signal from the patient, the biopotential signals containing EEG signal data and EMG signal data (col. 5, lines 16-40 of Greenwald), means analyzing a sample of sequential EEG signal data to obtain a first indicator indicative of the cerebral state of the patient and analyzing a sample of sequential EMG signal data temporally related to the EEG signal data sample to obtain a second indicator indicative of electromyographic activity in the patient (col. 7, lines 27-39 of Greenwald), and means producing a composite indicator from the first and second

indicators indicative of the cerebral state of the patient (col. 7, lines 40-49 of Greenwald). The analyzing means uses a length of EEG signal data sample to determine the first indicator and an EMG signal data sample to determine the second indicator (col. 7, lines 27-49 of Greenwald). However, Greenwald lacks the length of the EMG signal data sample being of shorter length than the EEG signal data sample and/or the analyzing means completely updating the second indicator more frequently than the first indicator.

Regarding claims 122-132, Lockard teaches an apparatus for ascertaining the cerebral state of a patient comprising means 13, 15 for obtaining biopotential signals, containing EEG and EMG signal data, from the patient (col. 3, lines 17-32 of Lockard), means analyzing a sample of sequential EEG signal data to obtain a first indicator indicative of the cerebral state of the patient and analyzing a sample of sequential EMG signal data temporally related to the EEG signal data sample to obtain a second indicator indicative of electromyographic activity in the patient (col. 4, lines 35-49; col. 5, lines 46-59; col. 6, line 20-col. 8, lines 45 of Lockard), and means producing a composite indicator from the first and second indicators indicative of the cerebral state of the patient (col. 8, line 46-col. 9, line 52 of Lockard). The analyzing means uses a length of EEG signal data sample to determine the first indicator and an EMG signal data sample to determine the second indicator (col. 5, lines 45-59; col. 6, line 20-col. 8, line 45 of Lockard), but fails to teach the EMG signal data sample being of shorter length than the EEG signal data sample or the analyzing means completely updating the second indicator more frequently than the first indicator

Montgomery et al. teaches sampling EEG signals and EMG signals monitored simultaneously at a higher rate dictated by the EMG sampling rate (paragraphs 165-166 of Montgomery). However, Montgomery is silent as to the length of the EEG signal data sample with respect to the length of the EMG signal data, and further lacks any other details as to the processing of the EEG and EMG signal data.

Therefore, the prior art of record fails to teach or fairly suggest a method for ascertaining the cerebral state of a patient wherein the analysis of the EMG signal effectively uses a sample of shorter length than that of the EEG signal data sample due to the higher frequency of the EMG signal data and the composite indication can be updated at a repetition rate allowed by the shorter sample length of the EMG signal data to rapidly indicate changes in the cerebral state of the patient, in combination with all of the other limitations of the claims. The prior art of record also fails to teach or fairly suggest an apparatus for ascertaining the cerebral state of a patient, wherein the analyzing means uses an EMG signal data sample of shorter length than the EEG signal data sample to determine the second indicator and completely updates the second indicator more frequently than the first indicator, in combination with all of the other limitations of the claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571)

272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PCM

Charles A Marmor, II
SPE Art Unit 3735